The focus of this paper begins with a comparison made in a lecture in 1991 by Colin Rowe at Cornell University in which Rowe compared Corbusier's Villa Savoye to another scene: the trenches in the Ardennes during WW1: Rowe stated: that the technologies of the one were responsible for the technologies of the other.

The operation became, then, to reevaluate Rowe's comparison today. Given the difficulty in locating a contemporary building with the same iconographic and canonical content as Villa Savoye such a comparison seemed as absurd as Jeff Wall's recent war tableau titled Dead Troops Talk: A Vision after an Ambush of a Red Army Patrol near Moqor Afganistan, Winter 1986. There seemed to be no recent architecture which could set up a pairing of such poignancy or irony. However, If one is to locate the technologies of those produced for the Gulf War to current architectural production two conditions became apparent. First the estrangement or rift between technology grows wider as technology resists an absolute absorption into the architectural subject. Whereas the Corbusien technologies of aircraft, ship building, new materials and production types sustained a host of architectural applications current technologies seem to resist direct transformation. Technical infrastructure can co-exist within most architectures relatively independently. Technical infiltration is only one aspect. Representation has also shifted radically. Technological production in the early 20th century brought forth new forms which informed emergent modernism in architecture. The micro chip or black box emblematic of current technological development resist representation by it's own formlessness. The second condition made apparent through these comparisons is the continuation of technology's relationship to progress. If the sum of all knowledge in this century represents 50 percent of all knowledge it has also witnessed the waning in the belief of a future inevitable superior to the present. Uncertainty undermines an earlier belief in this century in technology as an evolving, redemptive condition, or, quoting Andreas Huyssen, a century (that) was simultaneously a century of indescribable catastrophes and of ferocious hopes... Rowe's comparison and those today continue to identify technology in relationship to progress as ambiguous. Despite the current surge of new technologies (computer, communications, medicine) present cultural responses seems more convincing under what Huyssen calls compensative where "technification is compensated by historicization, and the dominance of science and a totalizing view of history (is compensated) by the multi-perspectival narratives of the humanities". Huyssen argues that the unavoidable disturbances of modernization are always compensated for. So that if technology is accepted as destiny such rituals of compensation arise as historization, lived experience and the authentic to counter technology as an absolute. Having outlined these two observations we wanted to look at some models which could support these arguments beginning with the first observation which identifies a rift between technology and representation in architecture. Corbusier's Villa Savoye marks not only the infiltration of technology into the architectural object but also technology's aetheticization. At the same time American painters like Charles Deluth and Charles Sheeler choose industrial architectures and machines as legitimate subjects for painting, for aetheticizing. Both optimistic and heroic, technology is seen as redemptive. Architects such as Mendelhson, Corbusier, and Albert Kahn represent this matter much through industrial projects such as factories for Ford motors. Whereby the architecture and the products (the automobile) it houses co-exist side by side as logical expressions of the new technologies. This relationship between technical product and architecture is mutual and consistent. Patronage is in consensus with a new architecture which is produced and aetheticized in direct relationship to the products being produced and sold from these factories. Problems of repetitive structure, lighting, and lightweight materials are solved with the same intent and methodologies arriving from technologies of automobile production. The architecture not only looks like the machine within but is made like it. Testing this observation against current practice we looked at large-scale factory work within our own office. A project for a high-tech laser machine tool company in America required housing production and demonstration facilities for sheet metal cutting tools. The ambition for the project: utilizing the same technology for production of the building itself quickly collapsed. Cost, labor, time and methods quickly reduced the architecture to means of the most cost-effective building: that is, the largest enclosure for the least cost. High technology can no longer determine the architecture, costs do. Therefore we found ourselves surpassed by the technologies programmed given the architectural means to house them.

In terms of expression, the formlessness of current technology evades representational translation. The black box of modern technology masks the workings. Kinetic expression has been replaced by computer chips. Technology's most provocative emblem the computer, film, or video screen has also been appropriated as technology's most readily assimilated icon. The screen requires an architectural surface that is depthless and non-spatial. Image is offered as a substitute for space or better yet offers the illusion of space replacing direct experience as the actual architectural moment. It offers a spatial condition which is visual not perceptual. This displacement further disrupts a reading of the body in relationship to architecture therefore calling for

new forms of compensation. A more radical form of compensation/ displacement is apparent in filmmaker George Lucas's San Francisco home. Beneath the veneer of Lucas's new-made Victorian farmhouse is a high tech web of infrastructure. Its very hiddeness seems to enhance it's power. Technology serves but is not expressed. A hybrid is formed of a utopian historicism with a utopian technocracy both separate and intact within a new subject. Rather than representing technology its ability to disappear and reappear in an architectural body marks a current relationship within sovereign/separate camps. Reversing Rowe's claim, the technology of the one now remains independent from the technology of the other. It is technology's ability to become enigmatic which empowers it.

Rituals of disaster

Expanding on the second point through the Rowe comparisons we considered technology's relation to progress and failure. After the first W.W.I and today technology continues to be posed in a binary relationship as both a positive beneficial force but always in respect to the potential for failure or the detrimental. In the Rowe example it is the specter of destruction through war on an unprecedented scale. As American artists aetheticized technology then, after the First World War, a generation of Europeans, significantly German artists, countered with works which cast technology in a role vulnerable to conditions of nature or suspect in contributing to a further dehumanization of mankind by increasing the potential for chance disaster or war. Many of these works were in direct relation to the experiences of the first work war, but, consider a pre-war work like Max Beckman's Titanic. Technology touted as invincible is depicted as diminutive and lost in the face of nature. Technology figures both as vehicle to expand disaster but also vulnerable to disaster under the canons of nature. German Dada art posed itself initially as an anti-art but also significantly as anti-technology where systems of science and logic are dis-assembled. Disasters such as the sinking of the Titanic, Hindenburg Zeppelin disaster, Tacoma Narrows bridge collapse, the Challenger Shuttle explosion and more recently the Chernobyl reactor disaster figure as public spectacle in the chronicling of technology's potential for catastrophic failure. Certainly cycles of disaster facilitated correction of types and methods ranging from bridge construction to advances in medicine.

An assumption central for a definition of progress is the understanding that failure is necessary for advancement of technological types. As painful as these transitions are Malcolm Glasdwell has suggested on the 10th anniversary of the Challenger disaster that correction of the problems that caused the explosion, the now infamous O-rings will not necessarily prevent further accidents. He cites, perhaps obviously, that other unforeseen problems can arise but significantly cites the problem of consumption as a further problem. Which can best be demonstrated by people who buy ABS brakes for their BMWs who consume the safety factor which technology has provided by assuming they can drive faster and more recklessly with better brakes and end up crashing in 200 car pile-ups on the autobahn. Again a relationship is set up considering cycles of compensation leading to cultural/ethical questions which end in valuation. Is it worth it, or not? The latest round of green ecological thinking and politicking can definitely be understood as a compensative cycle. It is a response to previous technological excesses and failures and an attempt to stabilize technology in a framework which redefines what is beneficial. This current round of valuation is implemented though recycled or non-toxic materials or cycles of green planning which is given a higher priority than capital initiatives.

Therefore referring to these comparisons one could conclude that technology is inevitably related to failure, failures which are not necessarily able to produce amendment. While technology's relationship to representation seems to have shifted radically in this century, technology's relationship to failure at the beginning and end of this century remains identical. It is to be seen if architecture can reestablish the rift between itself and technology as its modes of production remain comparatively unchanged to those of technology.

Inevitably technology is absorbed into culture. However, despite the present insistence of technology in determining architecture, architecture's own innate content such as desire, imagination, program, and production will continue to resist an absolute contribution from technology. Secondly, this stubbornness of architecture to resist the seduction of a comprehensive re-definition by technology is clear in the sense that architecture's persistent and continuing relationship to the body appears not to be diminished. Conditions of occupancy, spatiality, scale, and movement though space continue to resist ultimatums for which a technological other would attempt to displace or dislodge. or again quoting Huyssen.

"There can be no utopia in cyberspace, because there is no there there from which a utopia could emerge." It is the hybrid relationship where technology makes it's most compelling case where future technological re-mappings of how we inhabit space do and must co-exist with the familiar and the evolving to produce yet another condition.

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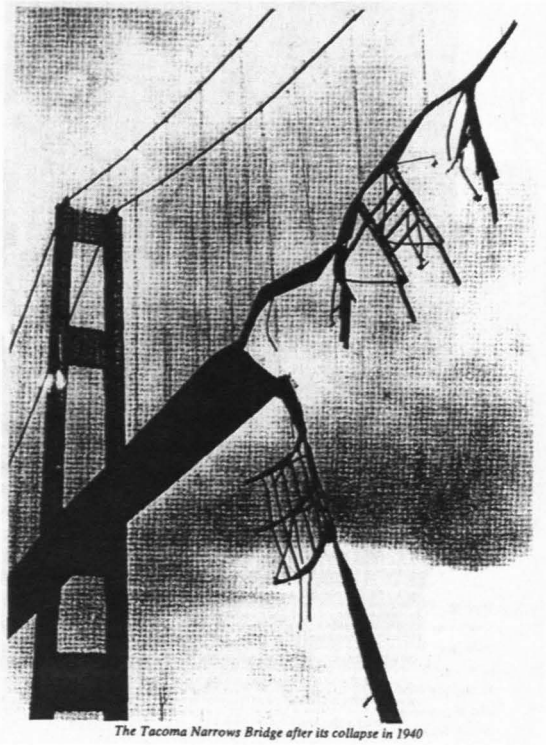

1| The Tacoma Narrows Bridge after its collapse in 1940

Notes::

Andreas Huyssen: Twilight Memories; Marking Time in a Culture of Amnesia, Routledge, New York, London 1995.

Malcolm Gladwell: Blowup, The New Yorker, Jan. 22, 1996.